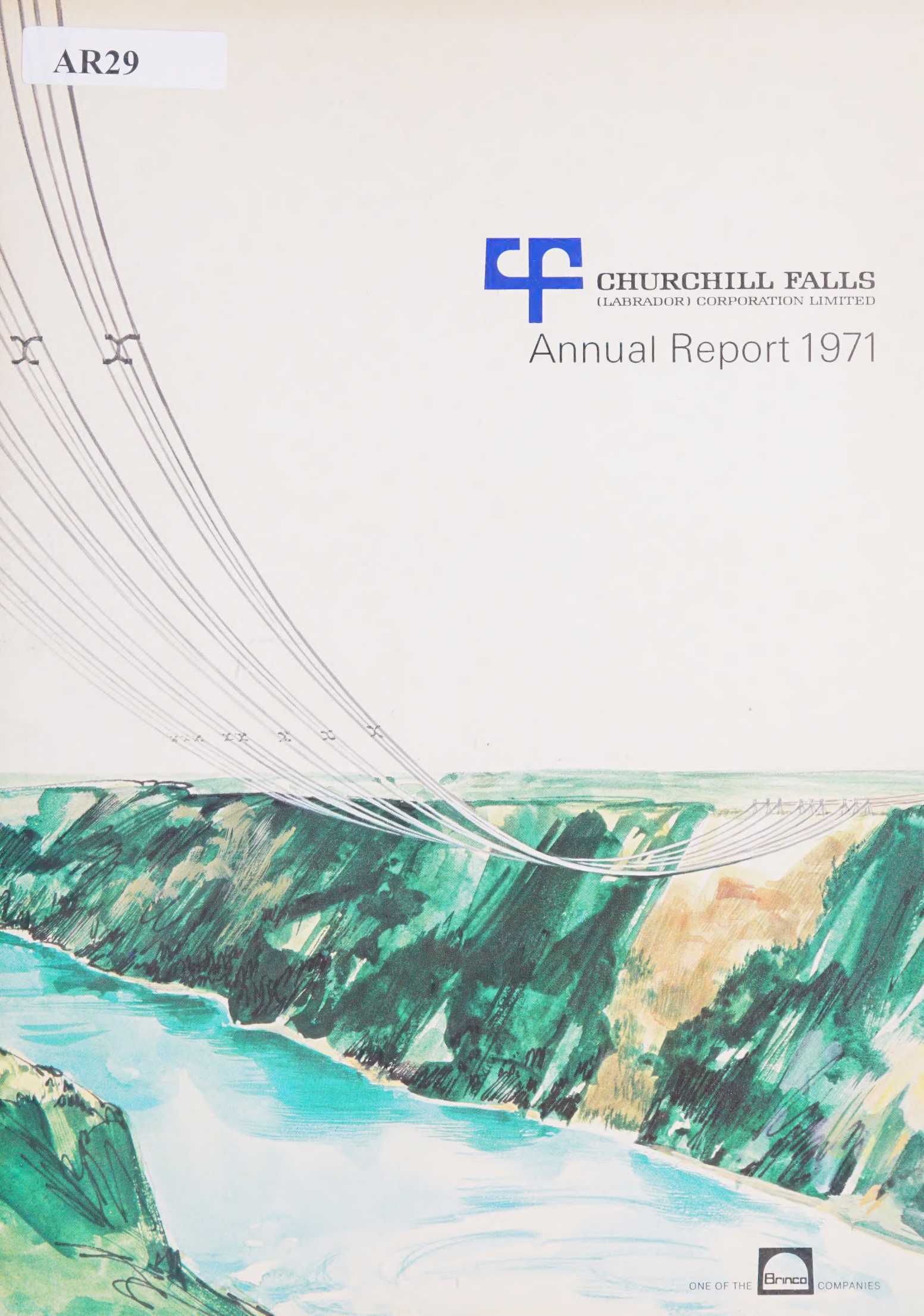


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**CHURCHILL FALLS**  
(LABRADOR) CORPORATION LIMITED

# Annual Report 1971





*Front cover: Transmission lines span the Churchill River.*





## Officers

Chairman:  
SIR VAL DUNCAN, O.B.E.

President and Chief Executive Officer:  
WILLIAM D. MULHOLLAND

Executive Vice-President:  
H. L. SNYDER, P. Eng.

Vice-President:  
H. W. MACDONELL, Q.C.

Vice-President:  
R. C. BERRY, C.A.

Vice-President:  
P. A. T. KEEPING

Vice-President:  
W. E. BRADFORD, C.G.A.

Vice-President and Project Manager, Churchill Falls:  
R. D. BOIVIN

Vice-President and General Counsel:  
N. M. PETERS

Secretary:  
G. R. DEVEY, C.A.

Treasurer:  
M. C. BURNES, C.A.

## Directors

\*HENRY BORDEN, S.M., C.M.G., Q.C.  
Toronto, Ontario  
Former Chairman,  
Brinco Limited

ROBERT A. BOYD, Eng.,  
Montreal, Quebec  
Commissioner,  
Quebec Hydro-Electric Commission

YVON De GUISE, Eng.,  
Montreal, Quebec  
Commissioner,  
Quebec Hydro-Electric Commission

\*SIR VAL DUNCAN, O.B.E.,  
London, England  
Chairman and Chief Executive,  
The Rio Tinto-Zinc Corporation Limited

ROLAND GIROUX,  
Montreal, Quebec  
President,  
Quebec Hydro-Electric Commission

\*SAM HARRIS,  
New York, U.S.A.  
Senior Partner,  
Fried, Frank, Harris, Shriver & Jacobson

\*ANDRÉ MONAST, Q.C.,  
Quebec City, Quebec  
Partner,  
St. Laurent, Monast, Desmeules & Walters

\*ROBERT D. MULHOLLAND,  
Montreal, Quebec  
Vice-Chairman,  
Bank of Montreal

\*WILLIAM D. MULHOLLAND,  
Montreal, Quebec  
President and Chief Executive Officer,  
Brinco Limited and  
Churchill Falls (Labrador) Corporation Limited;  
Chairman,  
British Newfoundland Exploration Limited

EDMUND L. de ROTHSCHILD, T.D.,  
London, England  
Chairman,  
N. M. Rothschild & Sons Limited

H. L. SNYDER, P. Eng.,  
Montreal, Quebec  
Vice-President,  
Brinco Limited;  
Executive Vice-President,  
Churchill Falls (Labrador) Corporation Limited;  
President,  
Twin Falls Power Corporation Limited

\*ARTHUR S. TORREY,  
Montreal, Quebec

SIR MARK TURNER,  
London, England  
Deputy Chairman,  
Kleinwort Benson Lonsdale Ltd., and  
The Rio Tinto-Zinc Corporation Limited

*\*Member of the Executive Committee*

HEAD OFFICE  
Crosbie Place, St. John's, Newfoundland

EXECUTIVE OFFICE  
One Westmount Square, Montreal 216, Quebec

*On peut obtenir le texte français de ce rapport auprès du service des Relations publiques, Churchill Falls (Labrador) Corporation Limited, Un, Westmount Square, Montréal 216 (Québec).*



## Foreword from the President

The year just ended saw steady progress on a broad front. Activity was at a normal level — a welcome change from the hard pace of the previous year. By year-end all major contracts necessary for completion of the project had been awarded. Overall, the project was about 79 per cent complete by year-end with work accounting for about 95 per cent of the project direct cost estimate either completed or under contract. Major work remaining to be completed included the stringing of conductor on the second 735 kV transmission line, erection of the third 735 kV transmission line, completion of the 230 kV inter-connection between the Churchill Falls and Twin Falls plants, completion of the Gabbro control structure connecting the Ossokmanuan and Smallwood reservoirs, and erection of the remaining turbine-generator units. Units 1 and 2 have been already installed and Units 3 and 4 are currently in the process of installation. With the exception of the third 735 kV transmission line, which is scheduled for completion in 1973, and Units 5 through eleven, this work is planned for completion in 1972.

Several notable events took place during the past year. At the beginning of July, the gates were closed at the Lobstick control structure to begin impoundment of water in the Smallwood Reservoir, named in honor of Hon. Joseph R. Smallwood. The Smallwood Reservoir will be the

*(continued on page 4)*

Top: William D. Mulholland, President and Chief Executive Officer, CFLCo (left) and Sir Val Duncan, O.B.E., Chairman.

On the generator floor (bottom) and in the turbine pit (facing page) commissioning engineers monitored instruments and controls during preliminary testing of the first two turbine-generator units prior to commercial delivery of power in December 1971.









third largest man-made lake in the world, with an area of more than 2,200 square miles.

In November the first traffic passed over the Churchill Falls-Goose Bay road. Hopefully, this is the first step in opening Labrador's "front door". Studies are under way this winter, involving the federal Ministry of Transport and Memorial University, intended to assess the practicability of extending the navigation season at Goose Bay by the use of icebreakers. CFLCo is cooperating in these studies and strongly supports this initiative.

Finally, in December the first and second turbine-generator units were placed in service — almost five years to the day after the start of construction. Although operation of units is not required under the power contract until May 1, 1972, this provided a welcome opportunity both for testing the performance of the units under operating conditions as well as for valuable training for the operating staff. At this writing, Unit 1 is out of service for replacement of the turbine lower seal ring but should be back on line before these words are read. Units 3 and 4, due to enter service during 1972, are both well ahead of schedule at this point.

Arrangements were completed recently for accelerating the final completion date of the project by about a year. The earlier completion target has, of course, required changes in the construction schedule, particularly in the manufacturing schedules for turbines and generators. The fact

*(continued on page 6)*

To carry transformers weighing up to 224 tons from the railway terminal at Esker to Churchill Falls, a special transporter had to be built. The 200-foot unit is powered by two 700-horsepower, six-wheel-drive tractor trucks, one in front and one in the rear. It travels at an average speed of between two and three miles per hour.





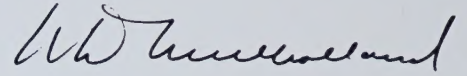




that we are able to take such a step with confidence at this point in time is a tribute both to the skill and reliability of our Canadian suppliers as well as to the outstanding performance to date of the thousands of men and women who have participated in the project to date.

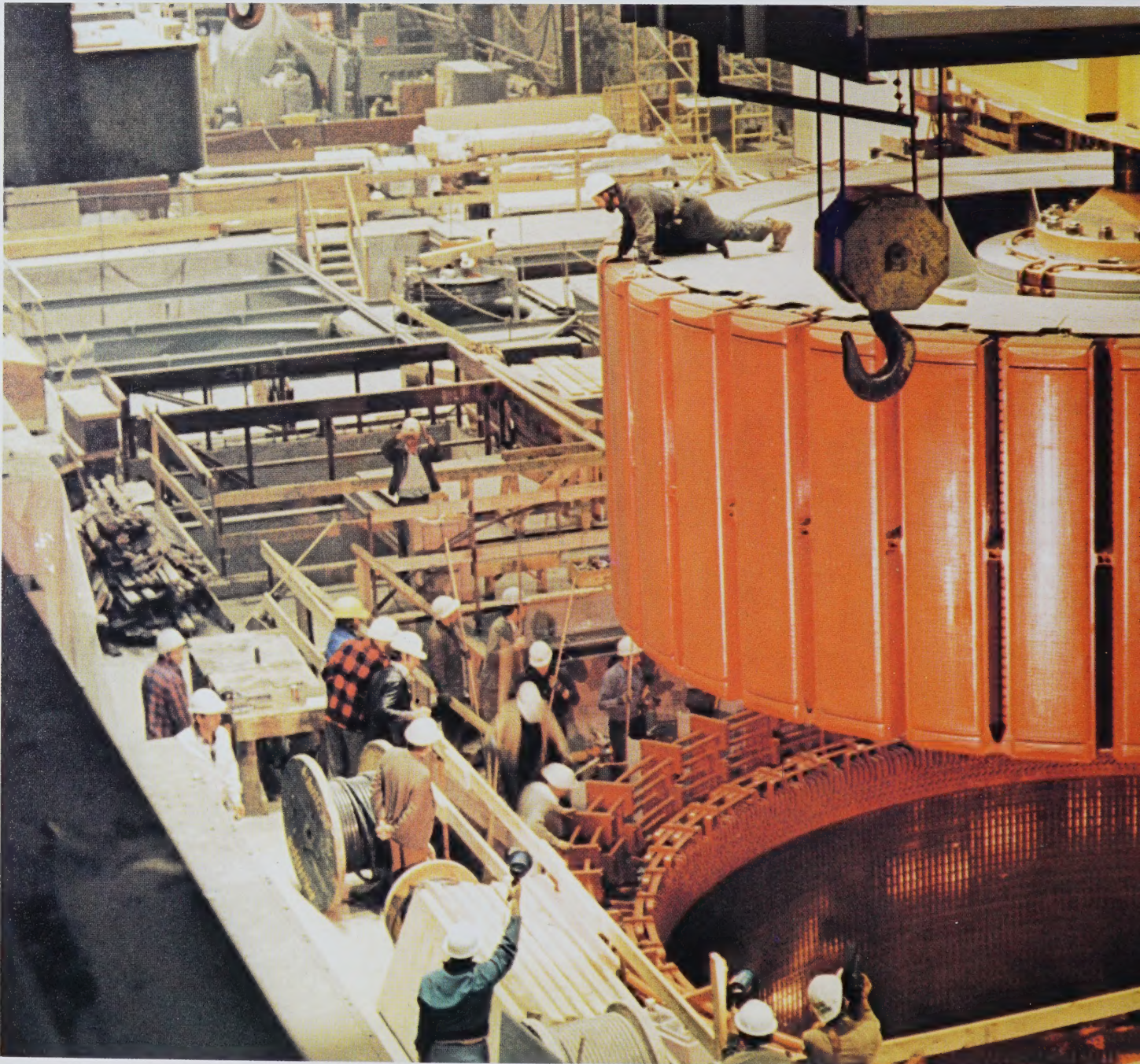
The official opening of the Churchill Falls development will take place on June 16th, 1972. This long-awaited occasion, which will certainly be a felicitous one for all concerned, will mark a turning point as Churchill Falls passes from a great construction project to an operating company. While such a transition is always a difficult process until it is completed, I am confident that the

traditions of teamwork, superior performance and loyalty established by the team which is building Churchill Falls will be carried on by the operating team and they, in their turn, will set new standards of performance and service in their exacting profession.

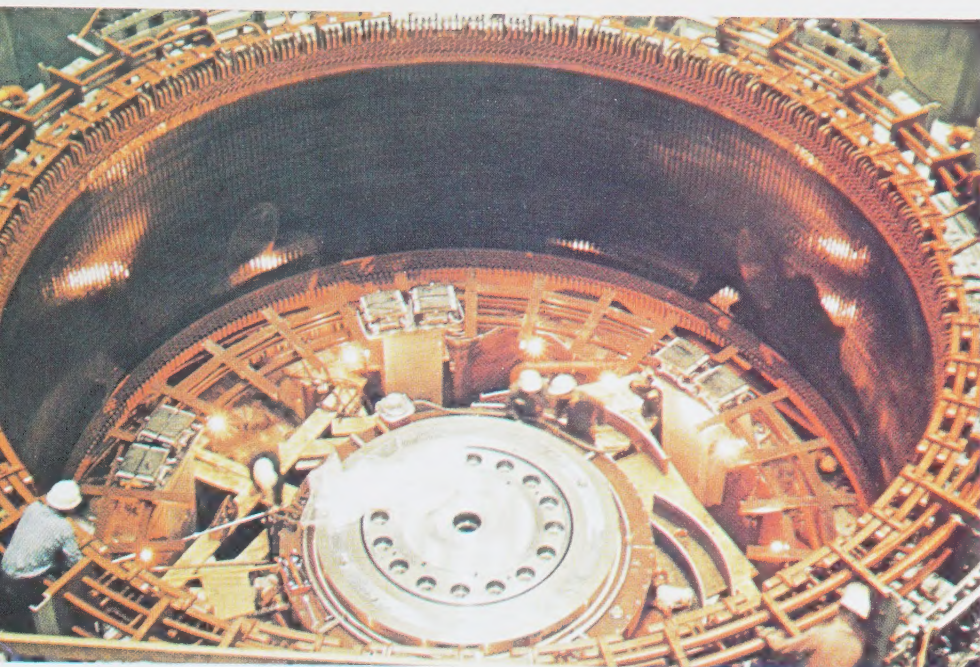


William D. Mulholland,  
President and Chief Executive Officer

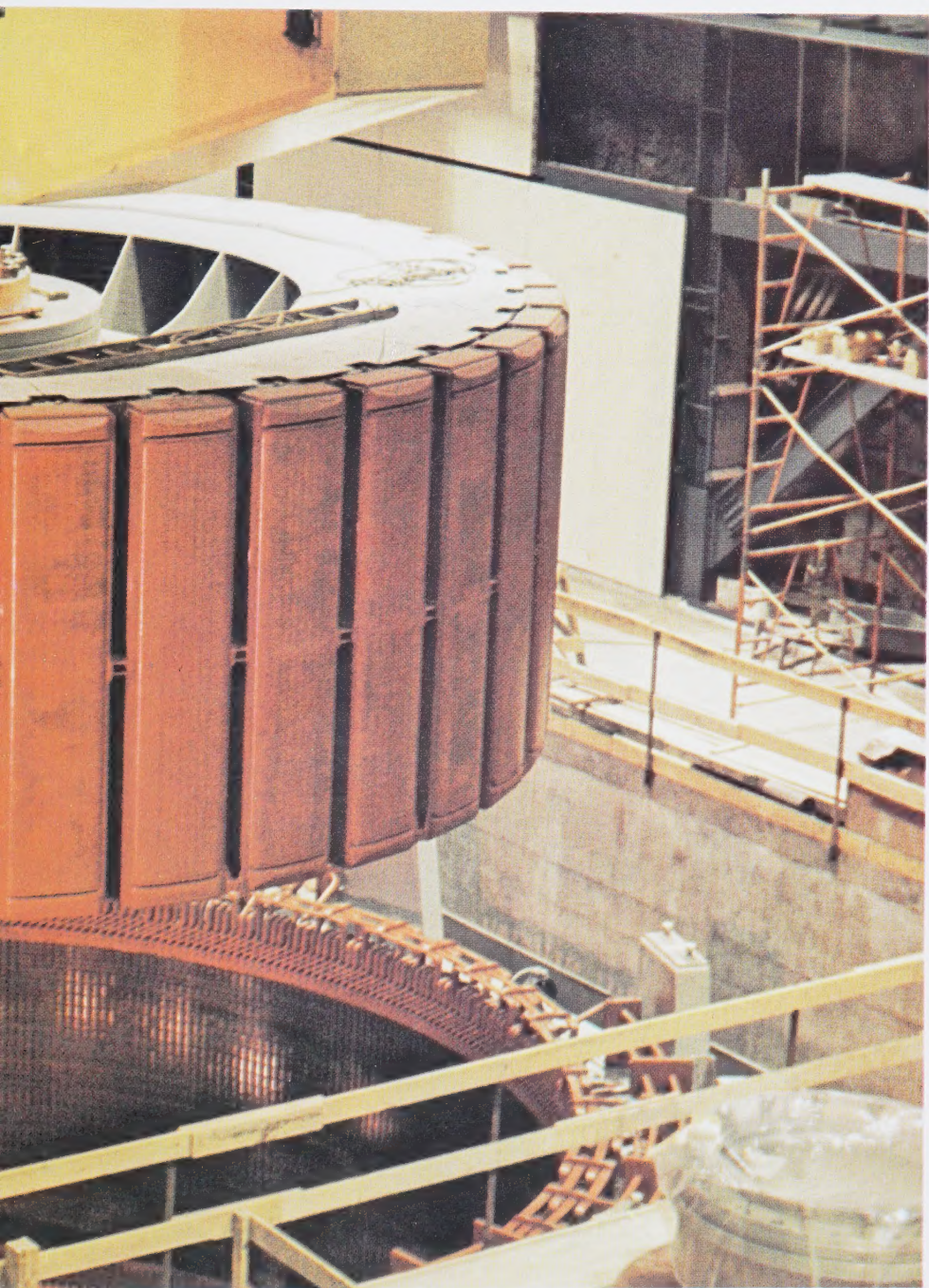
Montreal, March 14, 1972







Close-up of the stator core which houses the rotor. The thrust bearing to support the rotor is in the centre.



At mid-September, the 650-ton generator rotor and shaft for Unit 2 were positioned inside the stator core. To lift them, a 50-ton frame was connected to the two 400-ton powerhouse cranes to act as a weight distributor and leveling bar.



# Report of Directors to Shareholders

On July 1, 1971 the Lobstick control structure's three 250-ton gates were closed to begin filling the main 2,200-square-mile reservoir named for Hon. Joseph R. Smallwood, then Premier of Newfoundland and Labrador, who was the guest of honor at the ceremony.

The outstanding event of the year for Churchill Falls (Labrador) Corporation Limited was the beginning of regular delivery of energy into the Hydro-Québec system on December 6, 1971. With the firm deliveries under the power contract with Hydro-Québec to begin May 1, 1972, the emphasis is changing rapidly from construction to operations.

Arrangements were recently completed to permit acceleration of the remaining construction work on the Churchill Falls hydro-electric development in order to advance the completion dates for several of the generating units. This acceleration of the work will provide additional revenue to the company during the period from June 1973 to August

*(continued on page 17)*





**Balance Sheet as at December 31, 1971**

	1971	1970
<b>Assets</b>		
Current assets:		
Cash and short-term deposits . . . . .	\$ 16,519,368	\$ 17,883,591
Accounts receivable (including \$364,180 from affiliates) . . . . .	3,884,620	3,912,822
Supplies and prepaid expenses . . . . .	756,794	1,316,510
Total current assets . . . . .	<u>21,160,782</u>	<u>23,112,923</u>
Investment in shares of Twin Falls Power Corporation Limited (note 1) . . . . .	2,695,613	2,676,233
Churchill Falls power project, at cost . . . . .	602,973,779	447,470,756
Less accumulated depreciation . . . . .	<u>6,560,271</u>	<u>5,747,456</u>
	<u>596,413,508</u>	<u>441,723,300</u>
Trans-Labrador road, at cost . . . . .	2,050,281	—
Spare parts and vehicles, at cost . . . . .	298,318	—
Debt discount and financing expenses . . . . .	5,325,283	4,432,318
	<u>\$627,943,785</u>	<u>\$471,944,774</u>
<b>Liabilities and Shareholders' Equity</b>		
Current liabilities:		
Accounts payable and accrued liabilities . . . . .	\$ 28,108,577	\$ 29,839,724
Long-term debt (note 2) . . . . .	514,422,278	357,209,956
Shareholders' equity:		
Capital stock (note 3) . . . . .	82,899,992	82,899,992
Retained earnings (note 4) . . . . .	<u>2,512,938</u>	<u>1,995,102</u>
	<u>85,412,930</u>	<u>84,895,094</u>
Commitments and contingent liabilities (note 5)	<u>\$627,943,785</u>	<u>\$471,944,774</u>

*The accompanying notes are an integral part of the above balance sheet and should be read in conjunction therewith.*

On behalf of the Board:

William D. Mulholland, Director

Yvon De Guise, Director





**CHURCHILL FALLS**  
(LABRADOR) CORPORATION LIMITED

**Statement of Income and Retained Earnings  
for the year ended December 31, 1971**

	1971	1970
Sales of power . . . . .	\$ 92,110	\$ —
Rental of rights and facilities to subsidiary . . . . .	734,800	734,800
Gross revenue . . . . .	<u>826,910</u>	<u>734,800</u>
Horsepower royalty (note 5(b)) . . . . .	14,095	—
Newfoundland rental (note 5(b)) . . . . .	76,544	72,358
Depreciation . . . . .	<u>812,815</u>	<u>734,800</u>
	903,454	807,158
Operating profit [loss] for the year . . . . .	<u>[76,544]</u>	<u>[72,358]</u>
Equity in net income of Twin Falls Power Corporation Limited for the year . . . . .	594,380	518,274
Net income for the year . . . . .	517,836	445,916
Retained earnings at beginning of year . . . . .	1,995,102	1,549,186
Retained earnings at end of year . . . . .	<u>\$ 2,512,938</u>	<u>\$ 1,995,102</u>

*The accompanying notes are an integral part of the above statement of income and retained earnings and should be read in conjunction therewith.*

**Statement of Source and Application of Funds  
for the year ended December 31, 1971**

	1971	1970
Source of funds:		
From current operations:		
Net income [loss] before equity in net income of		
Twin Falls Power Corporation Limited . . . . .	\$ [76,544]	\$ [72,358]
Depreciation . . . . .	812,815	734,800
	<u>736,271</u>	<u>662,442</u>
Reduction in funds held by trustee . . . . .	—	1,400,000
Dividends from Twin Falls Power Corporation Limited . . . . .	575,000	525,000
Issue of long-term debt:		
First Mortgage Bonds Series A . . . . .	147,187,322	160,975,468
First Mortgage Bonds Series B . . . . .	10,025,000	7,250,000
	<u>158,523,593</u>	<u>170,812,910</u>
Application of funds:		
Development of Churchill Falls power project . . . . .	155,503,023	204,899,246
Trans-Labrador road . . . . .	2,050,281	—
Spare parts and vehicles . . . . .	298,318	—
Debt discount and financing expenses . . . . .	892,965	1,250,316
	<u>158,744,587</u>	<u>206,149,562</u>
Increase [decrease] in working capital . . . . .	<u>\$ [220,994]</u>	<u>\$ [35,336,652]</u>

*The accompanying notes are an integral part of the above statement of source and application of funds and should be read in conjunction therewith.*



## Notes to the Financial Statements as at December 31, 1971

### (1) Investment in Shares of Twin Falls Power Corporation Limited:

Churchill Falls (Labrador) Corporation Limited ("Churchill Falls") holds voting control of Twin Falls Power Corporation Limited ("Twin Falls") through its ownership of all the Class A shares which carry four votes per share but these shares represent only one-third of the shareholders' interest in Twin Falls and, therefore, its assets and liabilities have not been included in Churchill Falls' financial statements. The investment in Twin Falls is, however, carried on an equity basis.

Original cost . . . . .		\$2,500,000
Equity in retained earnings at beginning of year . . . . .	\$176,233	
Equity in net income for the year . . . . .	594,380	
	<u>770,613</u>	
Dividends for the year . . . . .	575,000	195,613
		<u>\$2,695,613</u>

### (2) Long-term Debt:

	Authorized	Issued and Outstanding	
First Mortgage Bonds:			
7 <sup>3</sup> / <sub>4</sub> % Series A due December 15, 2007	\$500,000,000 (U.S.)	\$371,300,000 (U.S.)	\$385,272,278
7 <sup>7</sup> / <sub>8</sub> % Series B due December 15, 2007	50,000,000	—	29,150,000
General Mortgage Bonds:			
7 <sup>1</sup> / <sub>2</sub> % due three years after latest maturity of any First Mortgage Bonds	100,000,000		100,000,000
			<u>\$514,422,278</u>

The First Mortgage Bonds Series A are carried in the balance sheet at the proceeds realized in Canadian dollars.

Bond Purchase Agreements dated May 15, 1969, have been signed covering the purchase of all the authorized First Mortgage Bonds.

The First Mortgage Bonds are repayable in semi-annual instalments commencing two years after completion of the Churchill Falls power project ("Project") sufficient to retire them fully by maturity.

The Deed of Trust and Mortgage securing the General Mortgage Bonds provides for a sinking fund to be applied in redemption of the bonds, commencing after completion of the Project amounting to 2% of the balance outstanding at the commencement of each year, payable in semi-annual instalments. The General Mortgage Bonds are subordinate to the First Mortgage Bonds.

Churchill Falls has entered into an agreement dated May 15, 1969, with a consortium of Canadian banks, the terms of which provide for a credit not exceeding \$150,000,000 at any one time outstanding. No amounts may be drawn down under the agreement prior to January 1, 1972, and it is subject to certain other conditions.

### (3) Capital Stock:

Common shares without nominal or par value authorized and issued as at December 31, 1971, were:

	Shares	Amount
Authorized . . . . .	10,000,000	
Issued and fully paid . . . . .	8,759,999	\$82,899,992



There are restrictions on the issue of further capital stock without the approval of the holders of at least 75% of the outstanding common shares.

(4) Dividend Restrictions:

The covenants of the debt instruments of Churchill Falls prohibit the payment of cash dividends by Churchill Falls prior to completion of the Project and place restrictions on the payment of cash dividends thereafter.

(5) Commitments and Contingent Liabilities:

- (a) At December 31, 1971, Churchill Falls had entered into contracts related to the Project involving expenditures after that date estimated at \$80,000,000. This includes an amount based on an evaluation of outstanding claims.
- (b) Under the terms of The Churchill Falls (Labrador) Corporation Limited (Lease) Act, 1961, and amendments thereto, Churchill Falls has entered into a 99-year lease covering the water power potential of the Upper Churchill Watershed and is required to pay an annual rental of 8% of the consolidated net profits before income taxes (as defined) and an annual royalty of 50 cents per horsepower year generated (as defined).
- (c) Churchill Falls' liability under its pension plan for past service which was being paid by annual instalments is now fully funded.

(6) Income Taxes:

Churchill Falls had no income subject to tax.

(7) Power Contract:

Quebec Hydro-Electric Commission and Churchill Falls have entered into a power contract dated May 12, 1969, providing for the purchase of substantially all the power from the Project for an initial period of approximately forty years with a renewal for a further period of twenty-five years.

(8) Directors' and Officers' Remuneration:

	<u>Number</u>	<u>Aggregate Remuneration</u>
Directors . . . . .	14	\$ 19,000
Officers . . . . .	12	162,641

There were three officers who were also directors.

Five of the officers did not receive any remuneration as officers.

### Auditors' Report to the Shareholders

We have examined the balance sheet of Churchill Falls (Labrador) Corporation Limited as at December 31, 1971, and the statements of income and retained earnings and source and application of funds for the year then ended. Our examination included a general review of the accounting procedures and such tests of accounting records and other supporting evidence as we considered necessary in the circumstances.

In our opinion, these financial statements present fairly the financial position of the company at December 31, 1971, and the results of its operations and the source and application of its funds for the year then ended, in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Peat, Marwick, Mitchell & Co.  
Chartered Accountants

Montreal, Que.  
February 2, 1972



# TWIN FALLS POWER CORPORATION LIMITED

## Balance Sheet as at December 31, 1971

	1971	1970
<b>Assets</b>		
Current assets:		
Cash and short-term deposits . . . . .	\$ 7,962,326	\$ 6,613,112
Accounts receivable . . . . .	622,969	453,891
Income taxes receivable (note 1):		
Prior years . . . . .	3,556,649	—
Current year's instalments . . . . .	743,700	—
Supplies and prepaid expenses . . . . .	80,330	146,670
Total current assets . . . . .	<u>12,965,974</u>	<u>7,213,673</u>
Funds held by trustee . . . . .	389	545
Plant and equipment, at cost . . . . .	59,922,476	59,914,629
Less accumulated depreciation . . . . .	<u>14,130,492</u>	<u>12,318,690</u>
	45,791,984	47,595,939
Construction in progress . . . . .	542,454	—
	<u>\$59,300,801</u>	<u>\$54,810,157</u>
<b>Liabilities and Shareholders' Equity</b>		
Current liabilities:		
Bank loan . . . . .	\$ 500,000	\$ —
Accounts payable and accrued liabilities (including \$127,588 to affiliates)	407,668	87,721
Dividends payable (including \$200,000 to affiliate) . . . . .	600,000	450,000
Income taxes payable . . . . .	—	182,413
First Mortgage Bonds due within one year (\$1,675,000 U.S.) (note 2) . . . .	<u>1,786,624</u>	<u>1,691,679</u>
Total current liabilities . . . . .	<u>3,294,292</u>	<u>2,411,813</u>
First Mortgage Bonds (note 2):		
5 <sup>1</sup> / <sub>2</sub> % Series A due June 30, 1986 (\$29,670,000 U.S.) . . . . .	31,593,675	33,137,687
6 <sup>1</sup> / <sub>4</sub> % Series B due June 30, 1989 (\$ 6,648,000 U.S.) . . . . .	<u>7,168,380</u>	<u>7,410,992</u>
	38,762,055	40,548,679
Deferred income taxes (note 1)	9,157,616	3,820,967
Shareholders' equity:		
Capital stock (note 3):		
Authorized: 500,000 Class A shares of the par value of \$10 each		
1,000,000 Class B shares of the par value of \$10 each		
Issued: 250,000 Class A shares fully paid . . . . .	2,500,000	2,500,000
500,000 Class B shares fully paid . . . . .	5,000,000	5,000,000
Retained earnings (note 2) . . . . .	<u>586,838</u>	<u>528,698</u>
	8,086,838	8,028,698
Commitments and contingent liabilities (note 4)	<u>\$59,300,801</u>	<u>\$54,810,157</u>

The accompanying notes are an integral part of the above balance sheet and should be read in conjunction therewith.

On behalf of the Board:

Harold L. Snyder, Director

W. J. Bennett, Director



# TWIN FALLS POWER CORPORATION LIMITED

## Statement of Income and Retained Earnings for the year ended December 31, 1971

	1971	1970
Sales of power . . . . .	\$ 8,749,287	\$ 8,929,564
Cost of power . . . . .	1,709,883	1,950,489
Interest . . . . .	2,357,184	2,448,078
Depreciation . . . . .	1,811,802	1,818,442
	<u>5,878,869</u>	<u>6,217,009</u>
Income before the following items . . . . .	2,870,418	2,712,555
Interest income . . . . .	692,722	537,394
	<u>3,563,140</u>	<u>3,249,949</u>
Taxes on income:		
Current . . . . .	—	1,300,190
Deferred . . . . .	1,780,000	394,938
	<u>1,780,000</u>	<u>1,695,128</u>
Net income for the year . . . . .	1,783,140	1,554,821
Retained earnings at beginning of year . . . . .	528,698	548,877
	<u>2,311,838</u>	<u>2,103,698</u>
Dividends . . . . .	1,725,000	1,575,000
Retained earnings at end of year . . . . .	<u>\$ 586,838</u>	<u>\$ 528,698</u>

The accompanying notes are an integral part of the above statement of income and retained earnings and should be read in conjunction therewith.

## Statement of Source and Application of Funds for the year ended December 31, 1971

	1971	1970
Source of funds:		
From current operations:		
Net income . . . . .	\$ 1,783,140	\$ 1,554,821
Depreciation . . . . .	1,811,802	1,818,442
Deferred income taxes . . . . .	1,780,000	394,938
Loss on disposal of plant and equipment . . . . .	—	870
	<u>5,374,942</u>	<u>3,769,071</u>
Increase in deferred income taxes (note 1) . . . . .	3,556,649	—
Reduction in funds held by trustee . . . . .	156	361
	<u>8,931,747</u>	<u>3,769,432</u>
Application of funds:		
Plant and equipment . . . . .	7,847	24,555
Construction in progress . . . . .	542,454	—
Reduction of long-term debt . . . . .	1,786,624	1,691,679
Dividends . . . . .	1,725,000	1,575,000
	<u>4,061,925</u>	<u>3,291,234</u>
Increase in working capital . . . . .	<u>\$ 4,869,822</u>	<u>\$ 478,198</u>

The accompanying notes are an integral part of the above statement of source and application of funds and should be read in conjunction therewith.



TWIN FALLS POWER CORPORATION LIMITED

Notes to the Financial Statements as at December 31, 1971

(1) Income Taxes:

During 1971, Twin Falls Power Corporation Limited ("Twin Falls") reclassified the major portion of its undepreciated capital cost for income tax purposes and filed amended income tax returns for the years 1966 to 1970 inclusive, claiming additional capital cost allowances sufficient to eliminate the taxable income in each of those years. The income tax recovery of \$3,556,649 arising from these claims has been credited to deferred income taxes on the accompanying balance sheet. The refund of this amount, together with interest of \$181,583, was received in January 1972. Similarly, Twin Falls will recover all instalment payments of 1971 income taxes amounting to \$743,700.

(2) First Mortgage Bonds:

The following amounts of 5<sup>1</sup>/<sub>2</sub>% First Mortgage Bonds Series A due June 30, 1986, and 6<sup>1</sup>/<sub>4</sub>% First Mortgage Bonds Series B due June 30, 1989, have been authorized, issued and retired by Twin Falls pursuant to the terms of the Deed of Trust and Mortgage, as amended ("Trust Deed").

	Series A (U.S. \$)	Series B (U.S. \$)
Authorized . . . . .	<u>\$42,500,000</u>	<u>\$10,000,000</u>
Issued . . . . .	39,500,000	8,000,000
Retired . . . . .	<u>8,380,000</u>	<u>1,127,000</u>
Outstanding December 31, 1971 . . . . .	<u>31,120,000</u>	<u>6,873,000</u>
Due within one year . . . . .	<u>\$ 1,450,000</u>	<u>\$ 225,000</u>

The Bonds of each Series are repayable in equal semi-annual instalments of principal and interest. The Bonds are secured by a first fixed and specific mortgage, pledge and charge on plant and equipment and long-term power and other contracts and a first floating charge on all other assets of Twin Falls. Certain restrictions are placed by the Trust Deed on the payment of dividends other than stock dividends.

The Bonds are carried in the balance sheet at the proceeds realized in Canadian dollars and U.S. funds required to service this debt are made available under long-term power contracts without loss or gain on exchange to Twin Falls.

(3) Capital Stock:

The issued share capital of Twin Falls consists of 250,000 Class A shares each of \$10 par value owned by Churchill Falls (Labrador) Corporation Limited ("Churchill Falls") and 500,000 Class B shares each of \$10 par value, owned by the present long-term customers of Twin Falls. The Class A shares are entitled to four votes per share and the Class B shares are entitled to one vote per share but rank *pari passu* in all other respects.

(4) Commitments and Contingent Liabilities:

- (a) Twin Falls has a sublease from Churchill Falls giving Twin Falls the right to develop the hydro-electric power potential of the Unknown River, a tributary of the Churchill River, at the site of the Twin Falls plant. The sublease expires December 31, 1989, but may be renewed for a term of 25 years, if Twin Falls so requests.
- (b) Rentals payable annually to Churchill Falls amount to \$305,000 and \$1.40 per installed horsepower. In addition, Twin Falls pays an annual royalty of 50 cents per horsepower year generated (as defined). In the event that Churchill Falls diverts water from Twin Falls it must deliver equivalent hydro-electric



## TWIN FALLS POWER CORPORATION LIMITED

power to Twin Falls as provided in the sublease. The rentals and royalty will be payable at the same rates, the royalty being calculated as though the power so delivered had been generated in the Twin Falls plant.

(c) Commitments in respect of construction in progress as at December 31, 1971, amounted to \$2,582,000.

(5) Directors and Officers:

Twin Falls has nine directors and eight officers including four who are directors and officers. No remuneration was paid by Twin Falls to the directors and officers.

### Auditors' Report to the Shareholders

We have examined the balance sheet of Twin Falls Power Corporation Limited as at December 31, 1971, and the statements of income and retained earnings and source and application of funds for the year then ended. Our examination included a general review of the accounting procedures and such tests of accounting records and other supporting evidence as we considered necessary in the circumstances.

In our opinion, these financial statements present fairly the financial position of the company at December 31, 1971, and the results of its operations and the source and application of its funds for the year then ended, in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Peat, Marwick, Mitchell & Co.  
Chartered Accountants

Montreal, Que.  
February 2, 1972



1976, and will result in final completion of the development a full year ahead of the original schedule. The chart on page 20 illustrates the planned installed capacity of the Churchill Falls plant over the period May 1972 to September 1976.

The industrial and economic development of Labrador is of great importance to the Province of Newfoundland and Labrador. That area is already yielding iron ore and holds promise of other mineral resources. The mining, concentrating and refining of such minerals, together with their related supporting services, requires assured supplies of electrical energy. Churchill Falls and Twin

Falls are capable of providing this energy and 530 megawatts, or an amount equal to 50 per cent of the installed generating capacity on the Island of Newfoundland, is specifically designated for existing and future requirements in Labrador.

There are many benefits which already have arisen from this development in Labrador. There is now a complete community, including houses and apartments, recreational facilities, a hotel, a church, a hospital and a bilingual school, served by a modern communications system. Together with the many miles of roads that form part of the power facility, the company has built a

*(continued on page 18)*

The forebay spillway, one of seven major concrete structures built to regulate and control the flow of water to the powerhouse, was completed during the early part of October. The water level was immediately raised in preparation for initial turbine testing.





large part of the 280-mile road system between the tidewater port of Goose Bay and the Quebec North Shore & Labrador Railway at Esker. This road is a valuable complement to that railway system which serves Sept-Iles and Schefferville. The airport, built jointly by the company and by the federal Department of Transport, is equipped for day and night operations. With a 5,500-foot runway, it is one of the best-equipped and best-operated airports of its size to be found in the northern part of Canada. It has meant that the community is served by regularly scheduled commercial jet aircraft.

The successful operation of all these facilities in what is still thought of as a bleak region of Canada proves that progressive development of







Labrador's other resources is quite feasible from the standpoint of supporting services. These pioneer transportation facilities will one day play an important role in providing access to new areas in Labrador as they are developed and will assist the growth of Goose Bay as a supply port for the region.

The Churchill Falls project has provided employment for nearly 30,000 men and women at the site. Off-site, the construction of the turbine-generators alone requires about 7,000,000 man-hours of work. Ninety-eight per cent of the numerous suppliers and fabricators of materials, machinery and equipment for the development are located in Canada.

## THE YEAR IN REVIEW

### Construction

Although two of the eleven turbine-generators are already completed, considerable work still remains to be done even if the threshold of initial power has been successfully crossed. The Gabbro control structure, providing a connection between the Ossokmanuan Reservoir feeding the Twin Falls power plant and the main

*(continued on page 20)*

*Facing page:* On October 14, the rising water of the forebay reached the sill of the intake structure (top). It is at this point that the water enters penstock openings on its way to the 475,000-kW turbine-generator units underground. On September 18, the cofferdam around the downstream end of the two tailrace tunnels was breached (bottom). To make certain construction flotsam would not sweep into the tunnels, the water level behind the cofferdam was raised a little higher than the river level. Thus, when the cofferdam was breached, the first movement of the water was out rather than in.

The final section of the penstock steel liner for Unit 2 (left) was inched into place in February 1971. The liner, which measures 14 feet, seven inches in diameter, was later encased in concrete.



Churchill Falls Construction Progress

Construction cost estimate: \$666 million  
Cost incurred as at December 31, 1971: \$510 million  
Percent work complete: 79

Completed  
Remaining

Completed:

Powerhouse, Turbines & Generators  
\$142 million

Water Storage Facilities  
\$136 million

Permanent & Construction  
Support Facilities  
\$125 million

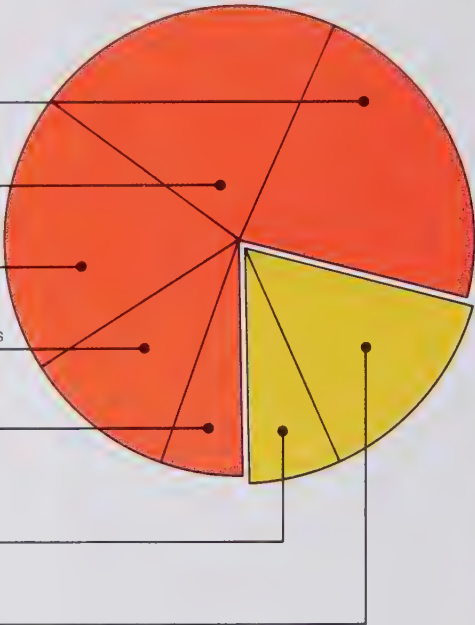
Switchyard & Transmission line facilities  
\$67 million

Management & Engineering  
\$40 million

Remaining:

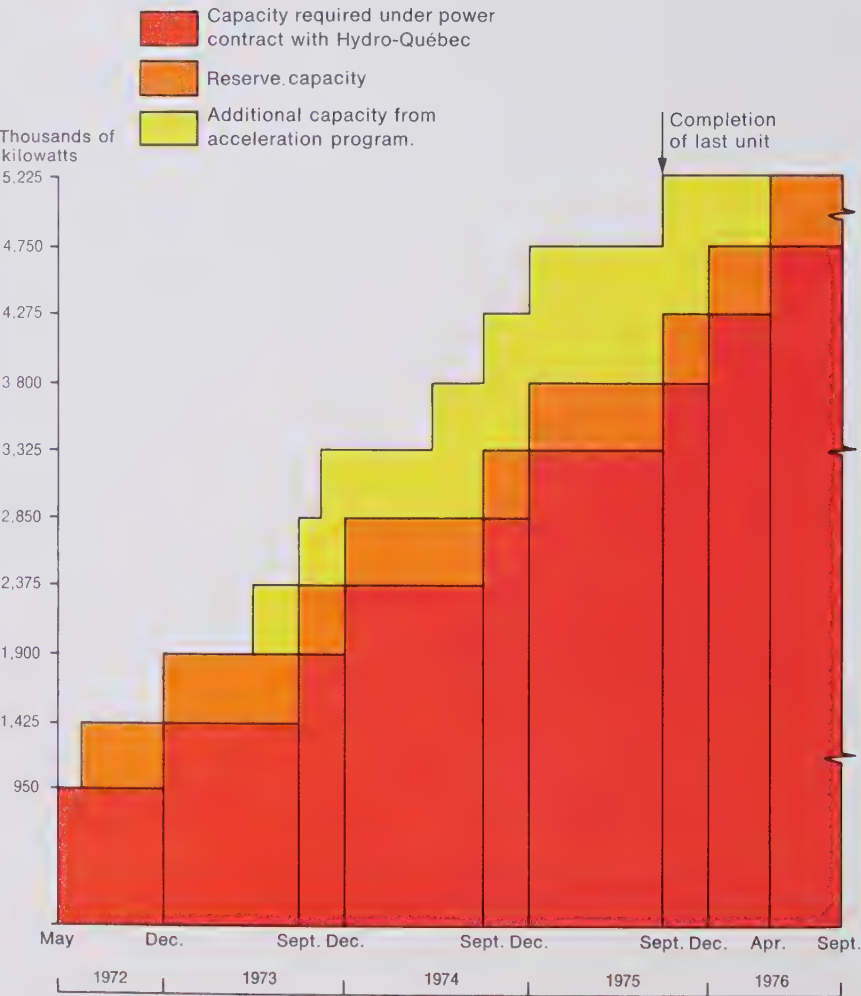
Support Services  
\$47 million

Construction work  
\$109 million



Light reflects off the water in the bottom of the surge chamber during the filling operation. Situated about 100 feet downstream from the powerhouse, the room is 763 feet long, 148 feet high and up to 64 feet wide.

Churchill Falls installed capacity



Smallwood Reservoir, will be completed this fall. The stringing of the second 735 kV line, started in 1971, will be completed in 1972. Two 230 kV lines from Churchill Falls to Twin Falls will be completed this summer. This link will enable the Churchill Falls powerhouse to supply additional electricity to Wabush and Labrador City and provide additional capacity as required from the 530 megawatts earmarked for this purpose.

In June and September of this year, turbine-generator Units 3 and 4, respectively, are scheduled to be completed and put into operation. The civil engineering, architectural, mechanical and electrical work will be started for Units 5 through 11, with the civil work for Units 5 and 6 planned for completion by the end of the year. A major change in the 1972 program is the acceleration of the start of the installation of imbedded turbine parts for Units 6 to 8 and penstock liners for Units 5 to 8.

(continued on page 22)





Underground powerhouse sported its new look early last fall as wall paneling and cove lighting fixtures were being installed around Unit 1 and Unit 2.



This year, the community of Churchill Falls will grow by a further 45 houses, bringing the total to 104 houses and 48 apartment units. A church and the Town Centre's indoor swimming pool are also being completed.

### Operations

A facility of Churchill Falls' size not only must be built competently but it also must be operated safely, reliably and efficiently. In the early part of 1970, the first members of the operations staff began moving to Churchill Falls to familiarize themselves with the installations and to train personnel. The present operations staff consists of approximately 100 people.

During the latter part of 1971, representatives of the company and of Local 1615 of the International Brotherhood of Electrical Workers signed a two-year collective agreement. It covers wages, working conditions and benefits of the hourly-paid operating personnel, and, in the

*Top:* A member of the snow survey group checks accumulated precipitation in a Sacramento Gauge, an integral part of an extensive network of 50 weather and streamflow gauging stations spread across the Churchill drainage area to provide data for forecasting flows into the reservoirs.

*Below:* A section of the trans-Labrador road stretching eastward. In 1971, CFLCo constructed a 66-mile section to complete the road which now links Esker, at Mile 286 on the Quebec North Shore & Labrador Railway, with the tidewater port of Goose Bay, via Churchill Falls.







Top: Work has started on the construction of the Gabbro control structure, the last of seven major structures required to regulate the flow of water. The Gabbro structure, scheduled to be completed this year, will permit water from the Ossokmanuan Reservoir to be directed into the Smallwood Reservoir. Work is also proceeding on the 230 kV lines (middle left) which will connect Churchill Falls to the existing Twin-Falls-to-Wabush system; this contract was awarded two years ahead of anticipated requirements to supply additional electricity to Wabush (middle right) and Labrador City (bottom) by August 1, 1972.

spirit of the unique eight-year labor agreement which covers Churchill Falls' construction program, it includes provisions for prompt and equitable settlement of any disputes without the need for work stoppages. This is a good start to a long and pleasant relationship with the members of the operations staff.

In addition to the operations staff, the liaison personnel of Hydro-Québec, some of whom are now located on site, have played a very important part in the smooth start-up of the plant and early delivery of energy. The relationship which has evolved from their presence has engendered a spirit of cooperation which continues to be extremely valuable in achieving the many important targets and goals.

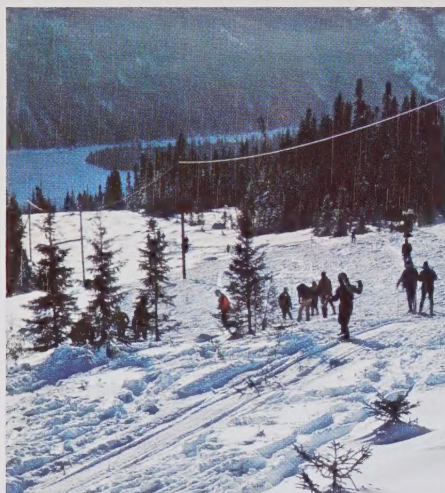
### Financial

In 1971, the financing of Project expenditures was provided by further drawdowns of First Mortgage Bonds. \$147 million and \$10 million were taken down from Series A and Series B Bonds, respectively. Of this amount, \$125 million was spent in 1971 on dykes, control structures, transmission lines, the powerhouse and switchyard facilities, and other construction. Construction at December 31, 1971, was 79 per cent complete and as depicted in the chart on page 20, the total direct construction expenditures to that stage have been \$510 million — well within the estimate made several years ago. An amount of \$30 million was spent for interest on long-term debt and corporate costs and the balance of \$2 million was spent for construction of the final link, between Churchill Falls and Goose Bay, of the trans-Labrador highway. Since 1967, total capital expenditures have amounted to \$603 million.

In 1971, Churchill Falls had net earnings of \$517,836 compared with \$445,916 in the previous year. These earnings arise from the company's one-third interest in Twin Falls Power Corporation Limited, which at present services the communities of Wabush and Labrador City.

Beginning on May 1, 1972, commercial deliveries of power to Hydro-  
(continued on page 24)





Recreational facilities abound in and around Churchill Falls and there is something to please every sportsman. The 2,000-foot ski hill (*top left*) is equipped with a T-bar lift. Swimming (*top right*) is enjoyed at Blueberry Lake, just yards away from the townsite. The indoor swimming pool (*bottom*) was recently completed. Other popular leisure-time activities include snowmobiling, indoor hockey, curling and bowling.

Québec will be made pursuant to the Power Contract and power valued at approximately \$13 million is scheduled for delivery during the remainder of the year. The income from these deliveries will contribute to financing the year's capital expenditures program. Planned capital expenditures during 1972 will be approximately \$100 million. In addition to these funds, a further \$79 million will be obtained through the First Mortgage Bonds and the bank standby credit arrangement will provide the remainder.

#### Personnel

In April 1971, Richard D. Boivin, project manager, was appointed a vice president of the company. In February 1972, Norbert M. Peters, general counsel, was appointed a vice president and Peter F. Nobbs, C.A., was appointed assistant treasurer.

\* \* \*

On behalf of the Board, we would like to express our appreciation to the employees of the company, to Acres Canadian Bechtel of Churchill Falls, and to the project's many contractors and suppliers for their outstanding efforts leading up to the first production of energy from the Churchill Falls plant.

Sir Val Duncan  
Chairman

William D. Mulholland  
President

Montreal, March 14, 1972









Commemorative medallion  
designed by  
Dora de Pétery Hunt